IN THE CLAIMS:

1.-5.   (Cancelled)

6.   (Previously presented) A superconducting ceramic of the general formula
$(A_{1-x}B_x)_yCu_zO_w \cdot (A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$
in which $0.1 \leq x < 1$
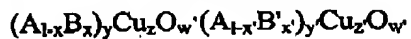
$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5,$

$y' = 2.5\text{-}3.5,$

$z = 1.5\text{-}3.5,$

$z' = 1.5\text{-}3.5,$

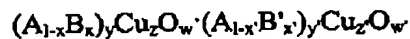$w = 6.0\text{-}8.0,$

$w' = 6.0\text{-}8.0,$

A is one rare earth element and

B and B' are two or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula $YbBaSrCu_3O_{6-8}$.

7.   (Cancelled)

8.   (Previously presented) A superconducting ceramic of the general formula
$(A_{1-x}B_x)_yCu_zO_w \cdot (A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$
in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5,$

$y' = 2.5\text{-}3.5,$

$z = 1.5\text{-}3.5,$

$z' = 1.5\text{-}3.5,$

$w = 6.0\text{-}8.0,$

$w' = 6.0\text{-}8.0,$

A is one rare earth element and

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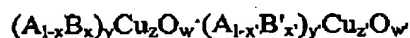
B and B' are two or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula $YbBa_{0.7}Sr_{0.6}Ca_{0.6}Cu_3O_{6-8}$.

9.   (Cancelled)

10.   (Previously presented) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w{\cdot}(A_{1-x}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,
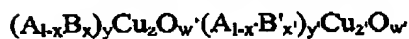
$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

A is more than one rare earth element and

B and B' are two or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula $Y_{0.5}Yb_{0.5}BaSrCu_3O_{6-8}$.

11.   (Previously presented) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w{\cdot}(A_{1-x}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

A is more than one rare earth element and

B and B' are two or more alkaline earth elements,

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wherein the superconducting ceramic has the stoichiometric formula $Y_{0.5}Yb_{0.5}BaCaCu_3O_{6-8}$.

12. - 17.   (Cancelled)

18.   (Previously presented)   A superconducting ceramic of the general formula

$((A_{1-p}A'_p)_{1-x}B_x)_yCu_zO_w$

in which $0.1 \leq x < 1$

$0 < p < 1$

$y = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

A and A' are different rare earth elements and

B is an alkaline earth element,

wherein the superconducting ceramic has the stoichiometric formula $Y_{0.5}Gd_{0.5}Ba_2Cu_3O_{6-8}$.

19.   (Previously presented)   A superconducting ceramic of the general formula

$((A_{1-p}A'_p)_{1-x}B_x)_yCu_zO_w$

in which $0.1 \leq x < 1$

$0 < p < 1$

$y = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

A and A' are different rare earth elements and

B is an alkaline earth element,

wherein the superconducting ceramic has the stoichiometric formula $Y_{0.5}Yb_{0.5}Ba_2Cu_3O_{6-8}$.

20.   (Previously Presented) A method for producing a superconducting ceramic according to claim 18, which comprises mixing together stoichiometric amounts of the oxides and/or carbonates of the constituent metals, in powder form, compressing the mixture to a shape and sintering the mixture at an elevated temperature.
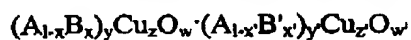
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21.   (Cancelled)

22.   (Previously Presented) A method for producing a superconducting ceramic according to claim 19, which comprises mixing together stoichiometric amounts of the oxides and/or carbonates of the constituent metals, in powder form, compressing the mixture to a shape and sintering the mixture at an elevated temperature.

23. – 38.   (Cancelled)

39.   (New) A superconducting ceramic of the general formula
$(A_{1-x}B_x)_yCu_zO_w \cdot (A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$
   in which $0.1 \leq x < 1$

        $0.1 \leq x' < 1$

        $y = 2.5\text{-}3.5,$

        $y' = 2.5\text{-}3.5,$

        $z = 1.5\text{-}3.5,$

        $z' = 1.5\text{-}3.5,$

        $w = 6.0\text{-}8.0,$

        $w' = 6.0\text{-}8.0,$

    wherein A includes Yb,

        B includes Ba and

        B' includes Sr.

40.   (New) A superconducting ceramic of the general formula $(A_{1-x}B_x)_yCu_zO_w \cdot (A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$
    in which $0.1 \leq x < 1$

        $0.1 \leq x' < 1$

        $y = 2.5\text{-}3.5,$

        $y' = 2.5\text{-}3.5,$

        $z = 1.5\text{-}3.5,$

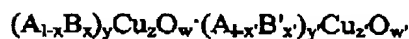W662642.1

$z' = 1.5\text{-}3.5,$

$w = 6.0\text{-}8.0,$

$w' = 6.0\text{-}8.0,$

wherein A includes Yb,

B includes Ba and

B' includes Sr and Ca.

41. (New) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\text{·}(A_{1-x'}B'_{x'})_{y'}Cu_zO_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5,$

$y' = 2.5\text{-}3.5,$

$z = 1.5\text{-}3.5,$
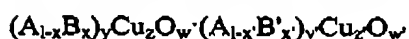
$z' = 1.5\text{-}3.5,$

$w = 6.0\text{-}8.0,$

$w' = 6.0\text{-}8.0,$

wherein A includes Y and Yb,

B includes Ba and

B' includes Sr.

42. (New) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\text{·}(A_{1-x'}B'_{x'})_{y'}Cu_zO_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5,$

$y' = 2.5\text{-}3.5,$

$z = 1.5\text{-}3.5,$

$z' = 1.5\text{-}3.5,$

$w = 6.0\text{-}8.0,$

$w' = 6.0\text{-}8.0,$

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wherein A includes Y and Yb,

B includes Ba and

B' includes Ca.

43.   (New) A superconducting ceramic of the general formula

$((A_{1-p}A'_p)_{1-x}B_x)_yCu_zO_w$

in which $0.1 \leq x < 1$

$0 < p < 1$

$y = 2.5\text{-}3.5,$

$z = 1.5\text{-}3.5,$

$w = 6.0\text{-}8.0,$

wherein A includes Y,

A' includes Gd and

B includes Ba.

44.   (New)   A superconducting ceramic of the general formula

$((A_{1-p}A'_p)_{1-x}B_x)_yCu_zO_w$

in which $0.1 \leq x < 1$

$0 < p < 1$

$y = 2.5\text{-}3.5,$

$z = 1.5\text{-}3.5,$

$w = 6.0\text{-}8.0,$

wherein A includes Y,

A' includes Yb and

B includes Ba.

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